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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/599,809	06/21/2000	Matthew J. Kotler	MS146859.01	8042
69316	7590	02/04/2008		
MICROSOFT CORPORATION ONE MICROSOFT WAY REDMOND, WA 98052			EXAMINER SINGH, RACHNA	
			ART UNIT	PAPER NUMBER
			2176	
			MAIL DATE	DELIVERY MODE
			02/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 09/599,809	Applicant(s) KOTLER ET AL.	
	Examiner Rachna Singh	Art Unit 2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13,41-50,82-92,98-101 and 103 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13,41-50,82-92,98-101 and 103 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/18/07; 11/14/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/14/07 has been entered.

2. Claims 1-13, 41-50, 82-92, 98-101, and 103 are currently pending. Claims 1, 41, 82, 85, 87, 89, 92, and 98 are independent claims.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-13 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-13 are considered software per se. Computer programs may be explicitly claimed as, for example, a series of code or instructions for performing functions or may be implicitly claimed as, for example, a system, a module or an apparatus. Where there is no evidence in the specification that a means which may be

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interpreted as software, hardware or combinations thereof necessarily includes hardware, it will be interpreted in its broadest reasonable sense as a software means, which is the case here. In this case, the architecture is described as one or more programs or program modules on page 19 of the specification.

Thus a claim to functional descriptive material, including computer programs, per se, is not patent eligible subject matter. It should be noted that functional descriptive material claimed in combination with an appropriate computer readable medium to enable the functionality to be realized is patent eligible subject matter if it is capable of producing a useful, concrete and tangible result when used in the computer system.

Claims 2-13 are rejected under 35 U.S.C. 101 for fully incorporating the deficiencies of their base claim from which they depend.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-13, 41-50, 82-92, 98-101, and 103 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, independent claims 1, 41, 82, 85, 87, 89, 92, and 98 recite the phrases, "primarily word-processing based" and "primarily spreadsheet-based". The term "primarily" is indefinite as it seems that a cell cannot be partially spreadsheet

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based and partially word-processing based. It appears that a cell must be based entirely of one type. Furthermore, the terms "word-processing based" and "spreadsheet-based" remains indefinite. It is unclear what determines how a table cell is "word-processing based" versus "spreadsheet-based". Based on Applicant's specification, figure 2 represents a word-processing based table whereas figure 3 represents a spreadsheet like table. Correction and/or clarification is required.

Claims 2-13, 42-50, 83-84, 86, 88, 90-91, 99-101 and 103 are rejected under 35 U.S.C. 112, second paragraph for fully incorporating the deficiencies of their base claim from which they depend.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claim 1-13, 41-43, 50, 82-92, 98, 101 and 103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laura Acklen & Read Gilgen ("Acklen"), *Using Corel WordPerfect 9*, 251-284, 424-434, 583-586 (1998), in view of *Webopedia Computer Dictionary* (hereinafter "Webopedia"), pgs. 1-7 and newly added supplemental pg. 1 (*available at www.pcwebopedia.com*).**

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Examiner Note: The 4 definitions cited from Webopedia are:

“OLE”, Last modified on May 16, 1998, pgs 1-3 (*available at* www.pcwebopedia.com/TERM/O/OLE.html); “OpenDoc”, Last modified on September 18, 1997, pgs. 4-6 (*available at* www.pcwebopedia.com/TERM/O/OpenDoc.html); “Network”, Last modified on September 1, 1996, pg. 7 (*available at* www.pcwebopedia.com/TERM/n/Network.html); “Enter Key”, Last modified on Sunday, September 01, 1996, supplemental pg. 1 (*available at* systems.webopedia.com/TERM/E/Enter-key.html).

Regarding independent claim 1, Acklen teaches an architecture comprising:

➤ *a table appearance manager to manage how a table appears in a document comprising a table component to support editing functionality of the table (see heading: “Organizing Information with Tables in WordPerfect”, pg. 252 et seq.: Acklen teaches a table manager to create, work, edit, format the way a table appears in a document), the table having a cell capable of being interpreted as primarily word-processing based or as primarily spreadsheet-based (see page 431 – Second heading: WordPerfect interprets cells with text in it as primarily word-processing based, and thus ignores these cells in processing spreadsheet-based cells (i.e., formula, numeric floating cells)); and*

➤ *a spreadsheet functionality manager to manage spreadsheet functions for the table and to receive data and formulas input into the table (see headings “Linking Spreadsheet Data” and “Using Spreadsheet Formulas in Tables”, pgs.*

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425-430: Acklen teaches a spreadsheet functionality manager that manages spreadsheet functions such as formulas, calculations, functions, floating cells, etc.).

Acklen does not explicitly teach:

➤ *wherein the table appearance manager and the spreadsheet functionality manager are architecturally separate system managers of the architecture.*

However, Webopedia teaches that the OLE (Object Linking and Embedding) standard and the OpenDoc Application Programming Interface (API) are compound document standards/interfaces wherein the independent programs (components → i.e. spreadsheet manager and word processor table manager) are architecturally separate despite the ability of the separate architectures to work together on a single document (see Webopedia, pgs. 1 and 4).

Since both references are from the same field of endeavor, the express motivational purpose of a more efficient and streamlined integration of independent programs onto a single compound document as disclosed by Webopedia would have been recognized in the pertinent art of Acklen. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Acklen with the teachings of Webopedia to include separate

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architectures for the table appearance manager and the spreadsheet functionality manager.

Acklen does not explicitly disclose "the functions comprising treating an enter key typed into the cell as meaning a return command if the cell is interpreted as primarily word-processing based or as meaning a command to navigate to another cell if interpreted as primarily spreadsheet based".

However, Webopedia discloses that the Enter key has a duality of functions: (i) return key, or (ii) moves cursor to the next field (see pg. 1). Furthermore, it was commonly known to those of ordinary skill in the art and would have been obvious at the time the invention was made to a person having ordinary skill in the art that the Enter key served the function of a "return" key in electronic word processing documents and served the function of moving a cursor to the next field in electronic spreadsheet documents.

Since both references are from the same field of endeavor, the express motivational purpose of streamlining and making more efficient a key by allowing dual functions on said key as disclosed by Webopedia would have been recognized in the pertinent art of Acklen. Therefore, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Acklen with the teachings of Webopedia to include separate architectures for the table appearance manager and the spreadsheet functionality manager.

Regarding claim 2, Acklen, in view of Webopedia, teach the architecture of claim 1, *wherein the document is a markup document* (see pgs. 583-586: Acklen teaches that an entire document, including tables, can be converted to HTML documents).

Regarding claim 3, Acklen, in view of Webopedia, further teach the architecture of claim 1, *wherein the table appearance manager provides a formula edit box to permit the user to enter a formula into a cell of the table* (see pgs. 425-427 and Fig. 15.22: Acklen teaches a Formula Textbox).

Regarding claim 4, Acklen, in view of Webopedia, teach a table manager to create, work, edit, format the way a table appears in a document (see Acklen heading: "Organizing Information with Tables in WordPerfect", pg. 252 *et seq.*) and a spreadsheet functionality manager that manages spreadsheet functions such as formulas, calculations, functions, floating cells, etc. (see Acklen headings "Linking Spreadsheet Data" and "Using Spreadsheet Formulas in Tables", pgs. 425-430).

Regarding claim 5, Acklen, in view of Webopedia, further teach a cell table to maintain data values and formulas used in the table (see pgs. 425-427 and Figs. 15.21, 15.22 → table maintains data values and formulas); and a format table to maintain formatting information used in the table (see Acklen pgs. 264-284 → formatting

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information can be saved when editing the format of the table); the formatting information comprising whether or not the cell is interpreted as primarily word-processing based or as primarily spreadsheet-based (see page 431 – Second heading: WordPerfect interprets cells with text in it as primarily word-processing based, and thus ignores these cells in processing spreadsheet-based cells (i.e., formula, numeric floating cells)).

Regarding claim 6, Acklen, in view of Webopedia, further teach *the architecture of claim 1, wherein the spreadsheet functionality manager comprises:*

a cell table to maintain data values and formulas used in the table (see Acklen pgs. 425-427 and Figs. 15.21, 15.22 → The table maintains data values and formulas);
and

a recalculation engine to recalculate the formulas following a change to a data value or formula in the cell table (see Acklen pg. 427 → The tables can be set to automatically recalculate when you make changes).

Regarding claim 7, Acklen, in view of Webopedia, further teach *the architecture of claim 1, wherein the spreadsheet functionality manager comprises:*

a cell table to maintain data values and formulas used in the table (see Acklen pgs. 425-427 and Figs. 15.21, 15.22 → The table maintains data values and formulas);

a delay parser to parse input for the cell table as needed (see Acklen pg. 427 – “View Error” → If you incorrectly build a formula, this command will allow you to find out

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why you got the error and how to fix the problem. It is therefore inherent that the input is parsed in order to determine whether a formula is entered correctly for calculation or in need of correction due to error); *and*

a recalculation engine to recalculate the formulas following a change to a data value or formula in the cell (see Acklen pg. 427 → The tables can be set to automatically recalculate when you make changes).

Regarding claims 8-10, Acklen, in view of Webopedia, further teach *the architecture of claim 1, wherein multiple tables appear in **one or more documents**, and the spreadsheet functionality manager is configured to maintain data and formulas for the multiple tables and track references made from one table to another table, the spreadsheet functionality being further configured to update any data and formulas in the multiple tables that is affected by a change made to one of the tables* (see Acklen pgs. 431-434 – “Project”; see also Fig. 15.30 → WordPerfect’s built-in spreadsheet capabilities allows the ability to link (*track references*) between a database table and a document table with formulas. Therefore, changes to one of the tables will automatically update any data and formulas affected by the change).

Regarding claim 11, Acklen, in view of Webopedia, further teach *the architecture of claim 1, wherein multiple tables appear in one or more documents, and wherein:*

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the table appearance manager comprises multiple spreadsheet components so that there is one spreadsheet component for an associated table, each spreadsheet component being configured to capture data and formulas input into the associated table; and the spreadsheet functionality manager comprises multiple grid components so that there is one grid component for an associated table and an associated spreadsheet component, each grid component maintaining the data, the formulas, and formatting used in the associated table (see pgs. 252-284 – “Organizing Information with Tables in WordPerfect” → Acklen teaches a table manager to create, work, edit, format the way a table appears in a document).

Regarding claim 12, Acklen, in view of Webopedia, further teach *the architecture of claim 1, further comprising a document renderer to render the document* (see Acklen pgs. 277-284 → WordPerfect allows the adding of realism to computer graphics by adding 3D qualities such as a shadows and variations in color and shade).

Regarding claim 13, Acklen teaches a *table appearance manager and the spreadsheet functionality manager*, but does not explicitly teach that the managers *reside on different computers*. However, Webopedia teaches that functions may reside on different computers in a computer network (see pg. 7). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to separate a table manager and a spreadsheet manager for the motivational purpose of saving hard drive space on a particular computer.

Regarding independent claims 41, 82, and 98, Acklen, in view of Webopedia, teach the architecture with respect to independent claim 1 as discussed above.

Furthermore, Acklen teaches *an architecture comprising*:

- first and second tables renderable for display as part of a common document (see pg. 254 → The Drag to Create a New Table option in the Create Table dialog box enables you to create a second table inside of a first table (*nested*). After the second table is created, you can work with it just the same as the first table);

- *a first spreadsheet component to receive at least one of data or a first formula entered into a first cell in the first table; a first grid component to hold the data or first formula in association with the first cell of the first table* (see Fig. 15.21 → Please note grid component and cells which can hold data and formulas; see also pgs. 425-430 - “Linking Spreadsheet Data” and “Using Spreadsheet Formulas in Tables” → Spreadsheet manager manages spreadsheet functions such as formulas, calculations, functions, floating cells, etc.);

- *a second spreadsheet component to receive at least a second formula entered into a second cell in the second table, the second formula referencing the first cell in the first table; and a second grid component to hold the second formula in association with the second cell of the second table* (see Fig. 15.21 → notice grid component and cells which can hold data and formulas; see also pgs. 425-430 - “Linking Spreadsheet Data” and “Using Spreadsheet Formulas in

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Tables" → Spreadsheet manager manages spreadsheet functions such as formulas, calculations, functions, floating cells, etc.).

Regarding claims 42, 83, 84, please refer to the rationale relied upon to reject claim 41.

Regarding claim 43, Acklen, in view of Webopedia, teach *the architecture of claim 41, wherein the second spreadsheet component presents a formula edit box to allow user entry of the second formula* (see Acklen pgs. 425-427 and Fig. 15.22 → The Formula Textbox).

Regarding claims 85-92, Acklen, in view of Webopedia, teaches the method integrating text and a spreadsheet table within a common document as discussed in the rejection of independent claim 82 above.

Moreover, the functions claimed in claims 85-92 are taught by Acklen (i.e., WordPerfect) as shown in the Acklen Table of Contents: Part I – Chapters 3 ("Basic Formatting") and 4 ("Using Writing Tools" – spell check, grammar check, find, replace, etc.) and Part IV ("Working with Graphics"). An expanded Table of Contents is further submitted for Applicant's benefit.

Regarding claim 103, please refer to the rationale relied upon to reject claim 102.

Regarding claims 50 and 101, Acklen, in view of Webopedia, further teach a free floating field renderable in the document but separately from the first and second tables; a third spreadsheet component to receive a third formula entered into the free floating field (see Acklen pgs. 429-430); and a third grid component to hold the third formula table (see Fig. 15.21 → Notice grid component and cells which can hold data and formulas; see also pgs. 425-430 - "Linking Spreadsheet Data" and "Using Spreadsheet Formulas in Tables" → Spreadsheet manager manages spreadsheet functions such as formulas, calculations, functions, floating cells, etc.).

9. **Claims 44-49, 99-100 are rejected under 35 U.S.C. 103(a) as being unpatentable over Laura Acklen & Read Gilgen ("Acklen"), *Using Corel WordPerfect 9*, 251-284, 424-434, 583-586 (1998), in view of *Webopedia Computer Dictionary* (hereinafter "Webopedia"), pgs. 1-7 (available at www.pcwebopedia.com), and further in view of Redpath, US 5,630,126, 05/1997.**

Regarding claims 44-49, 99, and 100, Acklen, in view of Webopedia, teach the architecture of claim 41 and 42 as discussed above, but does not specifically teach the architecture wherein the second spreadsheet component facilitates reference editing to the first cell in the first table comprising a recalculation engine wherein the first and second tables are updated to reflect a result produced by the recalculation engine.

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However, Redpath teaches a plurality of math cells located within a common compound document, all linked together (i.e. *dependencies*) so that related math parts are evaluated and updated upon user input. In response to user input, each math cell in the first set automatically displays the results from the reevaluation (i.e. *recalculation*) of its computational functions (i.e. *formulas*) (see col. 2, lines 38-40, 61-63; col. 3, lines 60 *et seq.*).

Since Acklen, in view of Webopedia, and Redpath are from the same field of endeavor, the purposes disclosed by Redpath would have been recognized in the pertinent art of Acklen, in view of Webopedia. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the teaching of Acklen, in view of Webopedia, with the teachings of Redpath to include reference editing between tables in a common compound document for the express motivational purpose of linking calculations between cells and thus, automatically recalculating and updating functions upon user input for both tables.

Response to Arguments

10. Applicant's amendments with respect to claims filed on 11/14/07 have been fully considered but are not persuasive.

In a previous interview, Examiner discussed the use of "if" clauses in the independent claims and suggested using language that did not create "conditional" situations may help further prosecution. Examiner believes the use of "in the event"

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instead of "if" does help better define the invention. However upon further review, the Examiner presents rejections under 35 U.S.C. 112, second paragraph and 35 U.S.C. 101 above. Particularly, the phrases "primarily word-processing based" and "primarily spreadsheet based" are indefinite for reasons set forth above under the heading "Claim Rejections - 35 U.S.C. 112".

The rejections under 35 U.S.C. 103 are maintained. Specifically, Examiner believes the feature in WordPerfect allowing a cell to be ignored as a spreadsheet based cell and processed as a word-processing based cell combined with the feature of "return commands" (as disclosed by Webopedia) teaches the claimed invention as set forth in the rejections above.

In view of the comments above, the rejections are maintained.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachna Singh whose telephone number is 571-272-4099. The examiner can normally be reached on M-F (8:30AM-6:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Rachna Singh
Primary Examiner
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